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ABSTRACT

Education in nutrition/dietetics in Kentucky and articulation within the field are examined, based on the Kentucky Allied Health Project (KAHP), which designed an articulated statewide system to promote entry and exit of personnel at a variety of educational levels. The KAHP model promotes articulation in learning, planning, and resource utilization. Information is provided on the history of the nutrition/dietetics profession, educational programs, accreditation and approval, and dietetics registration/certification. Efforts of the Nutrition/Dietetics Discipline Advisory Group resulted in: identifying 25 core courses among undergraduate programs; negotiating a transfer agreement between Eastern Kentucky University and other Kentucky programs; developing A Counseling Guide for Transfer Students based on a comparison of curricula, admissions, and transfer policies; developing a student information brochure; establishing a model curriculum database to facilitate greater articulation; and surveying 1977-1981 graduates to determine the actual success of Kentucky programs in meeting nutrition/dietetics labor market requirements. The Kentucky Dietetic Association has agreed to change its Career Guidance Committee with updating pertinent components of the system (i.e., curriculum core, transfer guide, student brochure). The use of the Program Evaluation and Review Technique is addressed, and the transfer agreement is appended. (SW)

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KENTUCKY ALLIED HEALTH PROJECT

NUTRITION/DIETETICS

DISCIPLINE ADVISORY GROUP

FINAL REPORT

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Commonwealth of Kentucky
Council on Higher Education
Frankfort, Kentucky 40601

Harry M. Snyder
Executive Director

June, 1982

HE 015 791

The Nutrition/Dietetic Report Series:

Volume 1 - Final Report, 1981

Volume 2 - Results of Dietetic Delineation Study, 1981

Volume 3 - Counseling Guide for Transfer Students for the 1981-82 Academic Year

Volume 4 - System of Graduate Follow-up, 1981

Comprehensive Report, 1982

Other Kentucky Allied Health Project Reports:

- Final Report of the Clinical Laboratory Sciences Discipline Advisory Group, 1981 and 1982
- Final Report of the Dental Auxiliary Discipline Advisory Group, 1981 and 1982
- Final Report of the Radiological Sciences Discipline Advisory Group, 1981 and 1982
- Final Report of the Rehabilitation Therapy Discipline Advisory Group, 1981 and 1982
- Final Report of the Respiratory Therapy Discipline Advisory Group, 1981 and 1982

Kentucky Allied Health Project
Council on Higher Education

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PREFACE

The Nutrition/Dietetics Disciplinary Advisory Group of the Kentucky Allied Health Project provided a unique opportunity for the dietetics educators in the state to meet together. Though articulation of dietetic education in Kentucky was the issue, numerous other opportunities became available, including a rapport among the members, a better understanding of one another's programs including didactic and clinical aspects of learning, an overall view of the dietetic education trends in Kentucky.

The dietetic delineation study was a monumental task but one that members found necessary for the project and one that should be of value to those beginning new programs.

The transfer agreement which was developed should be a valuable reference to both students and faculty of the participating programs.

The graduate follow-up form will provide a necessary program evaluation tool for educators on specific programs as well as those determining dietetic program needs of the state.

Difficulty in articulating from one program to another was found at the various levels unless programs were altered. This was especially noted for clinical experiences which are required by the American Dietetic Association.

Although the funding of the project is ended, it is hoped that the DAG will be maintained to address issues in Kentucky dietetic education.

The periodic review of program curricula and use of clinical sites is to be continued as a function of the Kentucky Dietetic Association. The feasibility of a manpower study of dietetic personnel in the state is also being contemplated. Thus, through the Kentucky Dietetic Association, it is hoped that certain aspects of the project's functions may be continued in the state of Kentucky.

Brian Ann Arnett

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ACKNOWLEDGEMENTS

While many individuals have contributed to the accomplishments of the Kentucky Allied Health Project, special thanks and recognition go to Joy M. Kirchner, and Joseph Hamburg, Dean, Allied Health Professions, University of Kentucky. Dr. Kirchner wrote the initial grant application while she was the Associate Director for Allied Health Education at the Council on Higher Education with the encouragement of Dr. Hamburg. Together their pragmatic but visionary planning laid the foundation for a statewide system of allied health education. We thank them.

A special word of thanks goes to Council staff members who helped make our work successful. We appreciate the support that the Executive Director, Harry M. Snyder gave to the project. The support given by Robert L. Barnett, Director of Policy Studies during the first two years of the project was invaluable. He guided the recruitment and hiring of project staff, oriented new staff, and assisted in providing information regarding policies and procedures that were essential to the initial planning of the project and its success. In addition, E. L. (Angie) Hebbeler, Director for Health Programs and Roy P. Peterson, Deputy Executive Director for Academic Affairs gave freely of their expertise and time. For the first two years of the project Gary G. Breegle was assistant project director. His guidance in planning, evaluation and research brought inestimable value to our efforts.

The Council's computer science staff also provided essential assistance. We appreciate the support of Michael R. Bailey, Linda P. Eldridge, Angela Mahoney and J. Kenneth Walker.

The reports could not have been prepared without the help of the Council's secretarial staff. In particular we are grateful to Darlene Blade, Teresa K. Kinne, and Ruth A. Taulbee for their patience and hardwork during the preparation of the reports. We also appreciate the secretarial assistance of Elaine F. Fultz, Diana Mangeot, Brenda Sageser, Shari Sullivan, Sandy K. Thurmond, Charlotte Vance and Sandy Waits.

We asked many others for their advice and counsel, and wish to recognize them for their contribution. They include the following: Wanda D. Bigham, Morehead State University; Ann S. Bisconti, American Society of Allied Health Professions; Keith D. Blayney, University of Alabama; Ralph Boatman, University of North Carolina; Frank G. Dickey, Chairman, National Commission on Allied Health Education; Marie C. Dietrich, New Jersey School of Allied Health Professions; Carley Dodd, Western Kentucky University; Richard J. Dowling, American Society of Allied Health Professions; Eleanor Gilpatrick, Hunter College; Robert Hutson, Quinnipiac College; Frank Kirk, International Technologies; Robert E. Kinsinger, W. K. Kellogg Foundation; William Knisely, Medical University of South Carolina; Craig Scanlan, Brookdale Community College; Dan Southern, Western Carolina University; Sharon Sweeting, Jackson Memorial Hospital; C. Kenneth Tanner, University of Tennessee; Robert Tomlinson, University of Illinois; and Irene Woodall, Bala-Cynwyd, Pennsylvania.

HIGHLIGHTS

The major goal of the Kentucky Allied Health Project was to design an articulated statewide system permitting entry and exit of prepared personnel at a variety of educational levels. Six disciplinary clusters were included in the project (1) clinical laboratory sciences, (2) dental auxiliaries, (3) nutrition/dietetics, (4) rehabilitation therapies, (5) radiological sciences, and (6) respiratory therapy.

Highlights of the accomplishments of the Nutrition/Dietetics Discipline Advisory Group include the following:

1. Statewide Curriculum Core. Approximately twenty-five courses were found to be common to a majority of dietetic programs in Kentucky (including associate and baccalaureate degree programs.) This core was identified after each program shared its curriculum.

2. Transfer Agreement. Based on the curriculum core Eastern Kentucky University designed a transfer agreement documenting acceptance of credit for students wishing to transfer any of the core courses from other Kentucky programs. It was EKU's belief this was the best way to secure students' rights over time.

3. Transfer Guide. A Counseling Guide for Transfer Students was developed directly from the DAG's comparison of curricula, admissions and transfer policies. The Guide was disseminated to all the Kentucky nutrition/dietetic programs to assist faculty in directing transfer students.

4. Student Brochure. Similarly a brochure was developed to distribute results of the DAG's comparisons in a feasible format for students.

5. Articulated Curriculum Model. The dietetic delineation study conducted by the DAG established a model curriculum data base to facilitate developing greater articulation.

6. Graduate Follow-up. Graduates from 1977-81 were surveyed to establish a more valid picture of the actual success of Kentucky programs in meeting nutrition/dietetic manpower requirements.

The Group recommended that selected activities be continued or monitored to maintain the System of Nutrition/Dietetic Education. The Kentucky Dietetic Association (KDA) has agreed to charge its Career Guidance Committee with updating pertinent components of the system (i.e. curriculum core, transfer guide, student brochure.) In addition the KDA Board approved the DAG's recommendation to survey nutrition/dietetic manpower in Kentucky. Continued concerted activities and meetings are planned in order to maintain the system and provide more meaningful manpower, graduate follow-up and curricular data for effective decision making at the programmatic and state planning levels.

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SETTING FOR THE PROJECT

The Kentucky Council on Higher Education, a statewide coordinating board, was awarded a grant in 1978 from the U.S. Department of Health and Human Services to develop a statewide system for allied health education. To adequately describe the development of KAHP, a brief description/definition of the purposes and functions of coordinating boards will be presented.

Kentucky Higher Education and Kentucky State Government are by necessity linked together, sometimes as adversaries, sometimes as partners. Sandwiched between the public colleges, universities and state government is the Kentucky Council on Higher Education, a statewide coordinating board.

The Council is one of the country's oldest higher education coordinating agencies (1934); however, until it was strengthened in 1966 and again in 1972, it had little authority with which to perform its coordinating responsibilities.

In the 1970's the Commonwealth, through the Council on Higher Education and with the full cooperation of the universities, took the initial steps toward the development of a system of higher education. A 1976 Council report, Kentucky and Comprehensive Planning for Higher Education, states:

> Although Kentucky has a great variety of public institutions, they are not organized into a cooperative system through a coordinated balance of programs, through consideration of unnecessary duplication or overlapping responsibilities...

In 1977, the adoption of mission statements was aimed at organizing a system of higher education. The Council stated that the system was to promote "quality education and research, efficient use of resources, effective communications and smooth movement of students between institutions." The Kentucky Allied Health Project (KAHP) was conceived and designed as a sub-system within this total system. As a sub-system for allied health education, KAHP would strive for both efficient utilization of resources and the development of smooth movement of students between institutions.

The publication entitled "A System of Higher Education in Kentucky Including Mission Statements" presents several characteristics of this system (Kentucky Council on Higher Education, 1977). Two characteristics which directly relate to the goals of the Kentucky Allied Health Project are:

1. "Centralized coordination of program offerings at all levels and among all institutions."

2. "Recognition of and program articulation with the vocational schools in implementing the 'career lattice' concept in post-secondary education."

For a statewide system of higher education to function smoothly, policy decisions must be made that support the characteristics of the system. Each institution must support the system's development. In a system of higher education, one of the central requirements is cooperation between and among institutions.

The Council's belief in and support of a higher education system provided the conceptual framework for KAHP. All curriculum decisions were entirely the responsibility of the cooperating faculty and institutions. In fact, because the Council views academic freedom as a universal and absolute concept, the success or failure of KAHP was directly related to the

institutional faculties. These faculties had to support the philosophy of articulation, be willing to engage in curriculum experimentation and to not only consider the needs of their respective institutions but the needs of the state as a whole. Some faculties did this with great success and a sense of commitmen to students from all levels of higher education and all types or institutions (i.e., vocational, private, public, and proprietary); other faculties clung to professiona and personal vested interests and were unable to respond to state and/or institutional needs.

The Council's willingness to respect and recognize the claims of academic freedom and procedural autonomy and the institution's equal willingness to recognize the state's right to participate in statewide planning for allied health education contributed to some of KAHP's success. These cooperative attitudes resulted from the fact that the formal structure brought the institutions and the Council together as partners in a joint venture firmly believing in shared group decision making and leadership.

PURPOSE OF THE PROJECT

The purpose of the Kentucky Allied Health Project (KAHP) is to use the resources available to develop and implement a model articulated system of allied health education. The articulated system is viewed in the broadest sense to include articulation in learning (i.e., plans to permit a smooth transition from one education level to another) and articulation in educational planning and resource utilization. There are currently 105 allied health programs in Kentucky, seventy-two (72) of these programs are offered by the public sector. Allied health activities have significantly increased the interinstitutional cooperation and coordination among these programs.

SIGNIFICANCE OF THE KENTUCKY ALLIED HEALTH PROJECT

Allied Health education programs in the 1960s underwent a significant growth phase fueled by federal monies from the Allied Health Professions Act of 1966. The funding stimulated the coalescence of many programs into schools of allied health professions in a collegiate or university setting. These schools expanded their student enrollments to fill the proliferating programs which represented a response to the nation's diverse health manpower needs.

However, curtailment of direct federal funding coupled with greater governmental demands for fiscal accountability in the late 1970s and early 1980s led to such events as program moratoria and a closer scrutiny of the fundamental goals and objectives of these schools.

While the development of allied health education has been characteristically segmented, the impact on the management of education for the 1980s mandates activities that are collaborative and articulated. Can allied health education in Kentucky, faced with such driving forces as shrinking economic resources, demands for accountability in costs, productivity and outcomes and changes in major technologies, meet these challenges?

In an attempt to meet these challenges, the Commonwealth of Kentucky has proposed the development of a statewide system for allied health education. This system interlocks segmented educational components into a comprehensive structure. The system is based upon three major social concerns:

(1) The concern to meet the needs of the patient.

Many driving forces are pressing for new approaches to allied health education which will culminate in a comprehensive system of care for the patient. If the goal of comprehensive care is to be achieved, there must be meaningful collaborative arrangements.

(2) The concern to meet the needs of students.

Students are seeking mechanisms for career mobility. A system of allied health education must be developed to help meet these needs. Much of the research on vocational choice and career mobility strongly support a flexible system of education with several entry and exit points. The goal of Kentucky's system of allied health education is to eliminate any unnecessary duplication or artificially imposed barriers that inhibit the ability or motivations of the individual.

(3) The concern to slow the spiraling cost of health care.

Allied health education cannot continue to operate oblivious to the cost to the patient. Allied health educators must recognize and find solutions to the problems of (1) eliminating unnecessary program duplication, (2) avoiding overtraining in terms of functions performed, and (3) improving the effectiveness and efficiency of programs.

In summary, the Kentucky Allied Health System is based upon three major social concerns: (1) the goal of comprehensive care for the individual, (2) the educational needs of the students, and (3) better utilization of existing resources.

Several barriers make the task of developing a system for allied health a difficult one; barriers created by curricula, educational institutions, health care facilities, laws and state government agencies and program accrediting agencies. However, perhaps the most formidable problem is overcoming professional biases. The temptation to exercise territorial imperatives is understandable. However, our greatest success occurred when educators philosophically believed in career mobility. In contrast, our greatest failures occurred when educators did not hold this philosophy and carefully guarded their "territory." To a very real extent, philosophy and territoriality retarded progress.

Perhaps the significance of KAHP is that a system has been developed considering:

What is best for the patient?

What is best for the student?

How can a system of allied health education be developed that is highly efficient and integrated?

ORGANIZATION OF KAHP

Six phases were designed to meet KAHP's major objective of developing and implementing a statewide system of articulated allied health education. These phases are summarized in Table 1.0.

Table 1.0

Phases of the Kentucky Allied Health Project

Phase I	Phase II	Phase III
Literature Review Manpower/Program Data Program Directory Evaluation Design Task Force	Six Discipline Advisory Groups Evaluation and Research Technical Advisory Group Role and Function Delineations Curriculum Reviews Manpower Models	Model Curricula Potential Articulation Designs Transfer Agreement Drafts System Recommendations
Phase IV	**Phase V**	**Phase VI**
Transfer Agreement Negotiations	Final Articulation Designs Articulation System Preparation Recommendations to CHE for Action	Statewide System Project Evaluation Articulation System Monitoring

To develop a model for statewide planning in allied health education, six disciplinary clusters were chosen. These clusters include: (1) clinical laboratory sciences, (2) dental auxiliaries, (3) nutrition/dietetics, (4) radiological sciences, (5) rehabilitation therapies, and (6) respiratory therapy. All levels of programs within each discipline cluster which existed in Kentucky were included in the system.

Phase I: Planning

KAHP's planning was accomplished by several individuals and groups working in concert providing a rich interplay of ideas and abilities. In the planning phase, the staff began a literature review to determine if similar efforts had been made, their strengths and weaknesses, and their relevance to KAHP. In addition, the staff began to synthesize relevant manpower and educational program data. The merging of allied health manpower data and educational program data was viewed as essential for statewide planning. While the Council collected information regarding public higher education, a complete directory needed to include private education, vocational education, hospital-based programs, and proprietary programs. Consequently, the first planning task was to complete a statewide inventory of allied health education programs. This inventory provided the basis for activating the discipline advisory groups for Phase II.

The establishment of an overall project evaluation design was also completed in Phase I. The planning and evaluation procedure known as Program Evaluation and Review Technique (PERT) was selected to provide continuous program evaluation of progress toward the achievement of predetermined objectives (Breegle, 1979).

A final activity in Phase I was the activation of the Allied Health Task

Force in May, 1979. The fifteen (15) member Task Force was composed of representatives from the public colleges and universities, independent colleges and universities, vocational schools, practicing clinicians, and hospital administrators. The primary objectives for the Task Force were to provide general coordination for the project and help secure support for the project from essential publics.

Phase II: Developing and Comparing Curricula

The first step for Phase II was to activate the six discipline advisory groups in September, 1979. The membership for these six advisory groups was recommended by the Allied Health Task Force. Each group was composed of approximately 15 members (a total of 90 individuals). These individuals were chosen to represent public and independent colleges and universities, vocational schools, proprietary schools, hospital-based programs, practicing clinicians, and professional organizations. (See Figure 1.0.) The central concept used in selecting these advisory group members was that those individuals responsible for implementing project recommendations should assume key leadership positions in developing the recommendations. It was also the project staff's basic belief that there should be shared responsibility between educational institutions and the statewide coordinating board for planning a system of allied health education.

In addition to the activation of six discipline advisory groups, the project was also assisted by an Evaluation and Research Technical Advisory Group. The primary objectives of this group were to (1) develop the methods

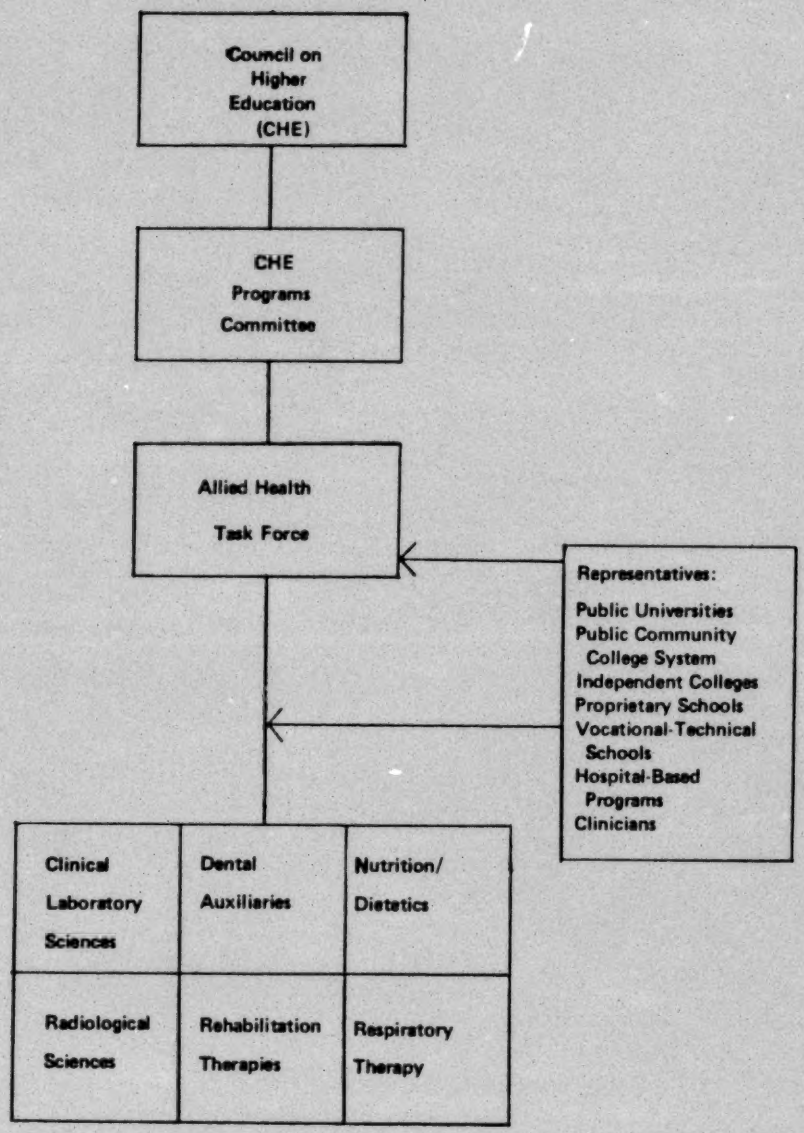

Figure 1.0 Organizational Structure of the Kentucky Allied Health Project

and instruments for the evaluation and implementation phase of the project, (2) review a competencies research model for use by two discipline advisory groups, (3) develop a manpower projection model, (4) develop a graduate follow-up model, (5) develop a program cost assessment model, (6) develop a practitioner profile component, and (7) guide data collection and analysis.

A major activity in Phase II was the delineation of roles and functions for each level of practice within each allied health profession and the identification of competencies by level with the goal of developing curricula. This task was seen as an essential prerequisite to the design of articulation models. Each discipline advisory group approached the delineation of roles and functions differently depending on the success of their respective professional associations.

The Respiratory Therapy and Nutrition/Dietetics groups chose to use the Health Services Mobility Study (HSMS) Method of Task Analysis and Curriculum Design (Gilpatrick, 1977) since neither group had an acceptable and comprehensive delineation of their practices. The Clinical Laboratory Sciences group validated competencies that had been developed by their professional society. The Dental Auxiliaries group chose to utilize the roles of dental auxiliaries as specified by the Kentucky Dental Practice Act. While they realized that roles may vary by state, they chose to develop an articulation model that could work within Kentucky.

The Radiological Sciences group was represented by several similar yet unique professions (i.e., radiography, radiation therapy, nuclear medicine, and radiation health). This group approached the delineation of roles and functions on separate but parallel paths. Each discipline in the cluster used existing resources to finalize their curricula.

While each discipline advisory group was developing a curricula that contained the information needed for safe, competent professional practice, they also gathered program-specific information such as course outlines, clock hours, percentage of lecture, lab and/or clinical components per course, minimal acceptable grades and the pre-professional and professional components of each curriculum. The data provided the fundamental information to begin planning the early phases of transfer negotiations.

Another major activity in Phase II was the development of a resources/ requirements model for each discipline for the purpose of manpower projections. The manpower data is essential information when considering the establishment, expansion, continuation, or termination of allied health programs. Three manpower models will be applied to the five allied health disciplines studied in KAHP. The models are: (1) manpower-population ratio, (2) trend analysis based on time series, and (3) health needs. Based on the manpower models KAHP completed for physical therapy (Breegle and King, 1981) and respiratory therapy, (Geiger and King, 1982) data are being collected to complete the clinical laboratory sciences and radiological sciences manpower models. While the limitations of making manpower projections are recognized, the information added another dimension to statewide planning efforts.

Phase III: Articulation Review

Joint meetings between the Discipline Advisory Groups and the Allied Health Task Force were held in the early summer of 1981. Together the groups (1) reviewed developed curricula, (2) reviewed the articulation designs within each discipline, (3) discussed recommendations for implementing and finalizing draft articulation agreements, and (4) discussed recommendations for implementing, monitoring, and evaluating the system.

These joint meetings provided an opportunity for the groups to share

not only their products such as curricula and draft transfer agreements, but also to discuss broader and less measurable outcomes of the process.

For example, the Task Force representative from vocational education shared the following:

> When the vocational education administrators asked the vocational faculty to participate on this project they agreed, but with little enthusiasm. However, their efforts resulted in the development of mutual respect between vocational education faculty and higher education faculty in the state. In addition, it enhanced communication within vocational educational programs. As a result of this communication, curricula were revised and strengthened. Furthermore, the vocational education faculty feel kinder toward higher education than they have in the past. Previously, they had felt like second class citizens in higher education. They emerged feeling that they were partners or co-equals. Consequently, they felt good about themselves and their programs. We have better vocational education programs because of their efforts.

Phase IV: Developing and Negotiating Transfer Agreements

After the joint meeting(s) of the Discipline Advisory Groups and the Task Force, mini-meetings were planned with selected Task Force members and faculty to help plan for the implementation of some of the transfer agreements.

Competency-based education was used as the theoretical framework for developing and negotiating transfer agreements. Types of agreements included the block credit transfer agreement and the course specific transfer agreement. Agreements were negotiated between educational systems and between specific programs/institutions (King and Breegle, 1981).

Phase V: Preparing the Articulation System

The primary activities in this phase included (1) final preparation of discipline specific articulation designs and (2) the preparation of a comprehensive statewide articulation system. Throughout the project the Task Force had a major responsibility in the formulation of recommendations for a

statewide system. These recommendations will go to the Council's Programs Committee and then to the Council on Higher Education for action.

Phase VI: Evaluation and Revision

Two primary evaluation components were planned: (1) evaluation of the project's ability to meet its stated objectives and (2) recommended procedures for evaluating the ability of the implemented system to facilitate the entry into and exit from an allied health educational program by capitalizing on student's previous relevant education and experience (i.e., ongoing monitoring of the success of the transfer agreements.)

KAHP'S APPROACH TO LEADERSHIP

This section is included to share with others the philosophy upon which the group meetings were planned. In addition it will explain the evoluntary developments in terms of group process. Particular emphasis will be placed on the importance of group centered leadership and leadership as a shared function. It is hoped that by sharing these intimate relationships others will be encouraged to participate in similar endeavors.

Traditional views of leadership: (1) focus on the group's task; (2) the leader directs and controls; (3) the feelings and emotions of group members are not recognized; (4) the leader assumes full responsibility for decisions; and (5) the task becomes more important than individual needs.

These traditional views of leadership were abandoned. KAHP staff viewed leadership as "Group Centered Leadership." While fully recognizing the importance of the task of developing a statewide system for allied health education, we also recognized that member interactions and the emotional reactions of individuals would have a profound effect on the successful

completion of our task.

Consequently we viewed leadership as service. Such service included 1) helping the group develop a trusting climate, 2) encouraging members to freely express their feelings and 3) assisting members in accomplishing their task.

Leadership was not something that just the designated project staff members did. Leadership was shared with all members of the group. By recognizing that leadership was a group responsibility, it was also recognized that success or failure would be equally shared by all group members. This concept of shared group leadership was important because it recognized that no one person could possibly be simultaneously aware of all the group-maintenance tasks, group-building tasks, and individual problems existing at any given moment within the group. Such awareness must be shared by all members of the group.

In summary, our belief in group centered leadership was based on the assumptions that: (1) the meetings were owned by the members; the KAHP staff was a helper to the group; however, the group was responsible for all major decisions; (2) members not only shared ownership, but responsiblity for completing tasks; (3) feelings, emotions, conflict were recognized as legitimate; and (4) the needs and feelings of all members were viewed as important.

With this as our philosophical framework, we observed each discipline advisory group work through three stages of group development (Yalom, 1970). Stage one considers orientation, hesitant participation, and search for meaning. Our orientation meeting held on September 6, 1979 provided the setting for stage one "goblet issues". During this stage group members size each other up through discussion of nonemotionally laden topics. The term comes from cocktail party type communication where each guest sizes up

the others by looking through a cocktail "goblet".

At this meeting Dr. Joy Kirchner, who had written the project grant, described the historical foundation for the project. Project objectives were described along with the roles of the discipline advisory groups and the project staff. Also at this meeting a group process activity called "Self Portrait" was completed. The self-portrait activity was planned to help promote positive relationships among and between discipline advisory group members and project staff. The advisory group members and project staff were asked to draw a story of their lives on a large piece of paper and share this story with the other members of the groups. While on the surface this appears to be a relatively unsophisticated procedure, it provided a successful way to meet one another fairly quickly. Hopefully, it assisted in the development of an accepting environment within which the groups could work during the coming year.

In stage two, issues regarding dominance, control, and power emerge. Hostility to the "leader" may also emerge as the group members realize that the "leader" is not perfect. We found that some meetings were not as effective as others; some advisory groups willingly shared all their available resources, (i.e., curricula, admissions policies and student success/failure rates) while other groups found it difficult to share. Democracy takes time; the price of group decision making and consensus is time, trust, and openness. Futhermore, tradition seemed to inhibit meeting effectiveness. For example, the older more established professions such as clinical laboratory sciences and the rehabilitation therapies had much more difficulty planning sequences of transfer, especially for the professional courses within the curricula. In contrast, respiratory therapy found the task less cumbersome. However, at no time during stage two did we feel overt hostility.

In stage three group members began to have concerns about intimacy

and closeness. As the groups began to be able to more freely address their positive and negative feelings, they became more cohesive and mature. This maturity was characterized by the following:

(1) Serious involvement in activities

As the members began to feel a sense of ownership and involvement in their tasks, they assumed greater responsibility for such activities as report writing and team building.

(2) Trust and caring

The trust and caring that emerged in some groups allowed the members to express concerns, feelings, fears, and ideas.

(3) Accepting new members

It was recognized that group membership would always be in the process of change, adding new members and losing old ones. However, new members were accepted and seen as a potential resource.

The previous description basically describes the work of the five discipline advisory groups that were viewed as somewhat or very successful. However, not all our discipline advisory groups were successful; and we would like to briefly try to present a rationale for why one group failed. A successful group interacts over time to accomplish one or more goals that are valued by each of the participating individuals (Bertcher, 1979). The physical therapy advisory group's philosophy statement stated that there was currently no organized effort on the part of the physical therapy profession to facilitate the upward mobility of the physical therapist's assistant within the profession. Mirroring this philosophy, physical therapy's support of transfer for the assistant was somewhat less than whole hearted.

As a result the project goals were in conflict with the goals of the physical therapy advisory group members. Because upward mobility for the assistant was not "valued" by this group, the project's objectives for

this group were not achieved. This was further reinforced to us by such statements as - "I don't feel its appropriate for this group to do more at this time." "Prove there is a need for articulation by a statistical study." "We met our objectives a long time ago, when we stated articulation was not appropriate at this time." " I would prefer if the project were terminated."

To summarize, no matter how competent the group leader or how many resources are available in terms of time and money, if the group does not highly value the goals, the group will fail.

To conclude we would like to offer a number of suggestions that may be useful to newly formed groups that have as their goal the development of articulation agreements:

(1) Develop an awareness for the interdependent behaviors that must be performed by group members.

Task behaviors are those behaviors that are related to achieving the groups goals such as giving suggestions or directions and seeking information. Maintenance functions are those behaviors related to maintaining harmonious relations among members such as helping, rewarding, relieving tension by joking, and showing satisfaction. Both task behaviors and maintenance behaviors are equally important.

(2) View leadership as a shared group function.

By viewing leadership as a shared group function, all members are encouraged to contribute and the sharing of leadership ensures that all the resources of the group will be used productively.

(3) Willingly accept new members.

While a high turnover of group membership may indicate that something is seriously wrong within the group, some turnover is natural. Welcome each new group member as a valuable resource.

(4) Allow "hidden agendas" to surface in open discussion.

Hidden agendas occur because an individual believes that the item may be judged as wrong or inappropriate, rather than as a reflection of a legitimate need or purpose. Remember, group members may be trying to simultaneously achieve individual and group goals. Often the degree to which both goals can be achieved determine the success of the group. Recognize that members may bring a hidden agenda to the group--one they hesitate to share openly because it is so self-oriented. Allow hidden agendas to surface in open discussion so that personal needs may be handled without disturbing the group.

(5) View conflict as natural.

Most substantive issues will involve some conflict. View this conflict as natural and indeed inevitable. Conflict worked through constructively can provide an important success experience for the group. Furthermore, it will reduce the fear of conflict and further strengthen the group.

The Nutrition/Dietetics educational programs involved in KAHP are summarized in Table 2.0. The location and type of institution offering each program are displayed on a Kentucky map (see Figure 2.0.)

Table 2.0

Nutrition/Dietetic Program Inventory

INSTITUTIONS	Dietetic Assistant (C)	Dietetic Technician (AD)	Traditional Dietetics (BS)	Coordinated Undergraduate (BS)	Dietetic Internship (Post BS C)	Master's Programs (MS)
Public Senior Institutions						
Eastern Kentucky University		X	X			X
Kentucky State University			X			
Morehead State University			X			
Murray State University		X	X			
University of Kentucky			X	X		X(2
Western Kentucky University			X			
Community Colleges						
Jefferson Community College*	X					
Independent Colleges						
Berea College			X			
Spalding College				X		
Hospital-Based Program						
University of Kentucky Medical Center					X	
TOTAL	1	2	7	2	1	3

C = Certificate
AD = Associate Degree
BS = Bachelor of Science
Post BS C = Post Bachelor of Science Certificate
MS = Master of Science
*Offered through the Culinary Arts program.

LOCATION AND TYPE OF SCHOOL OFFERING A PREPARATORY DEGREE
IN
NUTRITION/DIETETICS

AUGUST, 1981

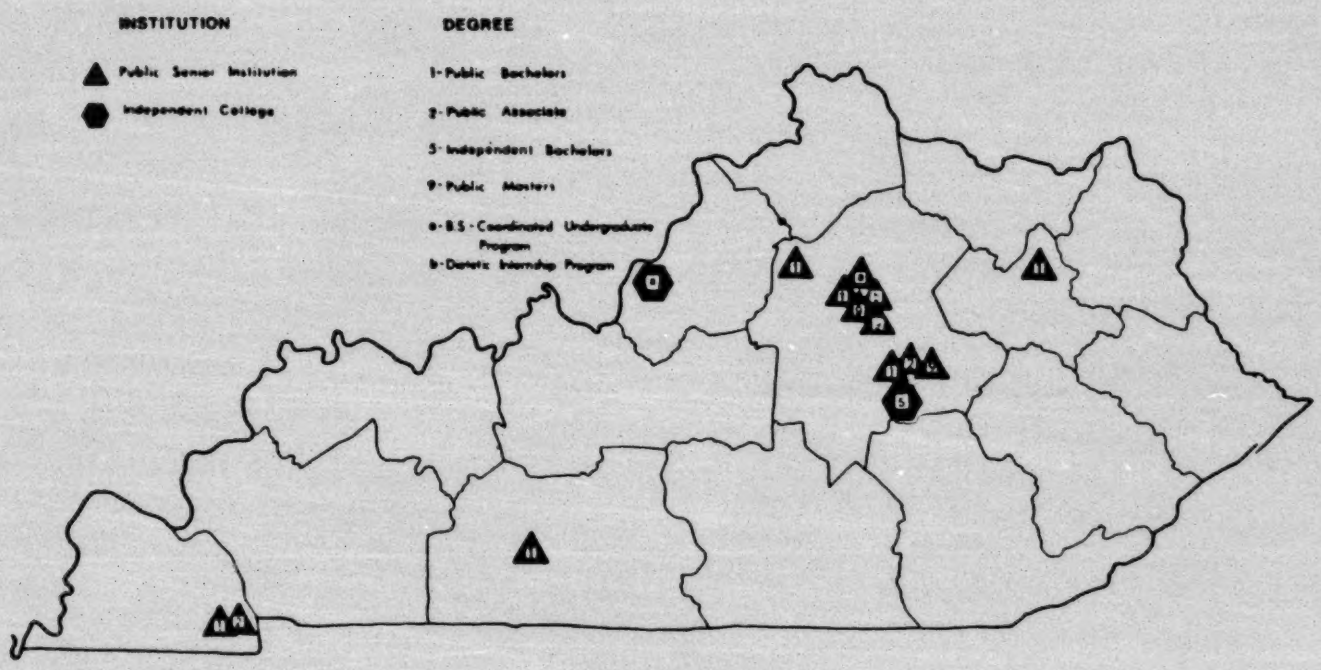

Figure 2.0. State map of Kentucky showing the location of nutrition/dietetic educational programs.

DEFINITION OF DIETETICS

The profession of dietetics is dedicated to the improvement of nutrition of human beings, the advancement of the science of dietetics and nutrition, and promotion of education in these and allied areas. The American Dietetic Association (ADA) is the professional membership organization for dietetic practitioners who have met the organization's admission requirements (The American Dietetic Association, 1981).

Dietetics is concerned with the science and art of human nutritional care, an essential component of health science. It includes the extending and imparting of knoweldge concerning foods which will provide nutrients sufficient for health and during disease throughout the life cycle, and the management of group feeding (Sullivan, 1979). Since optimal nourishment is fundamental to the growth and development of a human being, to the continuing maintenance of health and well-being and to the recovery from illness and disability, dietetics is a health science. The knoweldge and skills used by the dietitian in the art of translation are unique to the specific role which he/she assumes. The differentiation of dietitians is not in their basic scientific knowledge but in their subsidiary knowledge and skills required for a specific function of translation (Boatman, 1974).

HISTORICAL DEVELOPMENT

From the beginning of organized efforts around 1900 to lay the groundwork for the profession of dietetics, there has been a correlation between academic and experiential preparation of practitioners. The American Dietetic Association

was established in 1917 with a specific section addressing "Teaching" and developing educational standards based on their effort to define the dietitian's role and educational needs. The present day Council on Educational Preparation continues to maintain appropriate standards of education for the profession. Academic and experiential learning are still integrated in the education of dietetic practitioners.

The dietetic profession has continually shown concern about meeting recognized deficiencies in producing adequately trained practitioners to effectively meet health care requirements for nutritional services. Originally, specific courses and numbers of hours served as guidelines for academic preparation and were supplemented with an additional period of an experiential internship. This generally required four years of baccalaureate training plus an internship. Today there are other educational strategies which provide the integration of academic and experiential activities which meet the minimum requirements for obtaining eligibility for certification as a Registered Dietitian. Several revisions in academic requirements have come about since the inception of the American Dietetic Association. The most recent revision, called Plan IV, Minimum Academic Requirements for ADA Membership, was approved as a pilot program in 1970 and officially became effective July 1, 1972. "Academic requirements for Plan IV are expressed in terms of knowledge areas and basic competencies rather than mandating specific courses and semester hours of credit. The intent of this plan is to provide a conceptual framework which permits freedom and flexibility for the development of curricula and courses by individual institutions" (Chambers, 1978).

The development and formal recognition of a career ladder in dietetics corresponds to the profession's concern for providing efficient and effective service to health care consumers. The two year dietetic program graduates were established early on as "assistant dietitians" and were the forerunners of

the present day dietetic technicians. The evaluation of educational guidelines for technicians also followed the academic-experiential correlation.

The American Dietetic Association as of June, 1981 was conducting a delineation study of dietetic practice to validate the career ladder concept and to maintain guidelines for quality academic preparation of all dietetic practitioners. The study was designed to consist of: (1) delineation of clinical practices, (2) delineation of administrative or management practices and (3) delineation of community practices (Baird and Armstrong, 1981). However, the clinical component was the only section completed as of this writing.

EDUCATIONAL PATHWAYS TO PRACTICE

An unpublished report was presented on October 31, 1980 to a panel of technical experts for the Dietetic Manpower Demand Study being conducted by the American Dietetic Association. What follows is a section of the report on academic preparation in dietetics.

Academic Preparation

The American Dietetic Association, as the professional organization for 42,000 dietetic practitioners, is recognized by the U.S. Office of Education as the accrediting agency for two types of programs preparing dietetic practitioners: Coordinated Undergraduate Programs (CUPs) and dietetic internships. Other programs are subject to an approval process to assure compliance with standards established by ADA's Council on Educational Preparation; a separate organizational entity, the Commission on Accreditation (COA) evaluates program compliance with these standards or "Essentials," as they are commonly called.

The basis for all programs preparing future ADA dietitians is completion

of current minimum academic requirements (known as "Plan IV") plus an experience component. There are currently 242 competency-based Plan IV programs approved by the ADA and five different routes to active membership. (1981 Directory of Dietetic Programs, ADA) Successful completion of one of these routes is the only way in which a dietitian may become eligible to take the certification examination, which confers the title of Registered Dietitian (R.D.) upon those who pass the exam.

The five routes to active membership are:

1. CUP: There are currently 72 programs which provide the student with both the academic and clinical preparation within a four-year period. A baccalaureate degree is conferred upon successful completion of this program.

2. Internship: The baccalaureate degree (Plan IV) must be completed as well as a minimum of six months of clinical internship. 77 internship programs with positions for 789 interns will be available in 1981.

3. Three-year Preplanned Associate Membership: A baccalaureate degree (Plan IV) and three years of approved experience are required.

4. Master's Degree: This must be in dietetics or a related field (including Plan IV requirements). Either six months experience or a preplanned assistantship is an additional requirement.

5. Doctorate: Similar to Master's route except experience is required in teaching, research or clinical practice.

Applications for membership via the latter three routes are reviewed on an individual basis...

An additional route to active membership, the traineeship, has recently been phased out. This is part of ADA's critical examination of those educational programs which are currently approved but not accredited by ADA. All approved programs are being considered to see if they warrant application for accreditation status or if they should be discontinued.

ADA also approves programs preparing dietetic technicians and dietetic assistants. There are 60 approved technician programs and 199 approved assistant programs. Dietetic technicians may become members of ADA or of the

Hospital, Institution and Educational Food Service Society (HIEFSS); dietetic assistants may not be ADA members, but 10,000 are members of HIEFSS. Neither dietetic technicians nor dietetic assistants are eligible to take the certification exam (for registration.)

(This is the end of this section of the unpublished ADA paper.)

ACCREDITATION AND APPROVAL*

Essentials for dietetic programs are established, refined, and approved by the Council on Educational Preparation (CEP) of the American Dietetic Association. The Commission on Accreditation (COA) evaluates program compliance with these Essentials. The American Dietetic Association is recognized as the accrediting agency for Coordinated Undergraduate Programs in Dietetics by the Council on Postsecondary Accreditation and for both Dietetic Internships and Coordinated Undergraduate Programs by the U.S. Office of Education.

Accreditation assures the members of the dietetic profession, employers, and recipients of dietetic services that Dietetic Internships and Coordinated Undergraduate Programs meet uniform standards of quality and are responsive to the country's needs.

The Dietetic Assistant and Dietetic Technician Programs are subject to an approval process which assures that programs are in compliance with the essentials established by the Council on Educational Preparation of the American Dietetic Association.

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*The American Dietetic Association: 1981 Directory of Dietetic Programs: Accredited and Approved. Chicago, Illinois: The American Dietetic Association, 1980.

DIETETIC REGISTRATION/CERTIFICATION

An unpublished report was presented on October 31, 1980 to a panel of technical experts for the Dietetic Manpower Demand Study being conducted by the American Dietetic Association. What follows is a section of the report on the certification exam in dietetics leading to registration.

Certification Exam (for Registration)

Before discussing the types and test performance of dietitians who take the semiannual certification exam (for registration), two caveats must be kept in mind: 1) there is no data currently available to link the various routes to membership to exam performance (i.e, how well each route prepares practitioners to take the exam); and 2) the exam has not yet been constructed in such a manner as to designate an expected pass/fail ratio (i.e, it has not been designed so that a specific percentage of examinees is expected to pass the exam)...

Certification is to ADA members what licensure is to other professions. The certification vs. licensure battle has long waged within the ADA; the current opinion is that certification of the dietitian is sufficient, but this may change over time as more licensed health professions are included in the third-party payment system while dietitians are left behind. This issue may also become a moot point if current ADA efforts in this area, such as locating funds for a study to prove that dietetic services are cost beneficial and cost effective, are successful.

Because of the frequent use of the term Registered Dietitian, the term "registration" is commonly used by ADA as a synonym for certification. For a dietetic practitioner to receive the certification of Registered Dietitian, (s)he must complete one of five different combinations of education and experiential training in order to become eligible to take the certification exam. Successful

completion of this exam has two immediate benefits: 1) it allows the dietitian the status of R.D., upon which some employers now insist; 2) it assures the employer and consumer that this person has a particular level of skill and knowledge. In order for the R.D. to maintain this status (s)he must complete a total of 75 hours of continuing education within each five-year period of practice. As of September 1980, there were over 32,000 Registered Dietitians.

The development of the certification exam and the maintenance of the registry list of R.D.s are the responsibility of ADA's Commission on Dietetic Registration (CDR). CDR expects to substantially revise the exam in the near future to include a better balance of skill/knowledge questions; the exam is primarily knowledge-based at present. The first exam to result from ADA's Predictive Validity Study was administered in April 1980. CDR recognizes the need to continually revise the exam.

(This is the end of this section of the unpublished ADA paper.)

DIETETIC ARTICULATION

Elements of articulation in dietetics have been apparent since the profession began. However, the components of the career ladder were not formalized until 1971 and included the dietetic assistant, the dietetic technician and the registered dietitian. A major focus of the profession is and has been on the role of the dietetic technician as the assistant to the dietitian, with the dietetic assistant (food service supervisor) as support personnel. Regardless of the emphasis, the variety of ways to progress on the career ladder produces problems unique to effective and efficient implementation of dietetic articulation. The nutrition/dietetics articulation model shown in Figure 3.0 displays the variations.

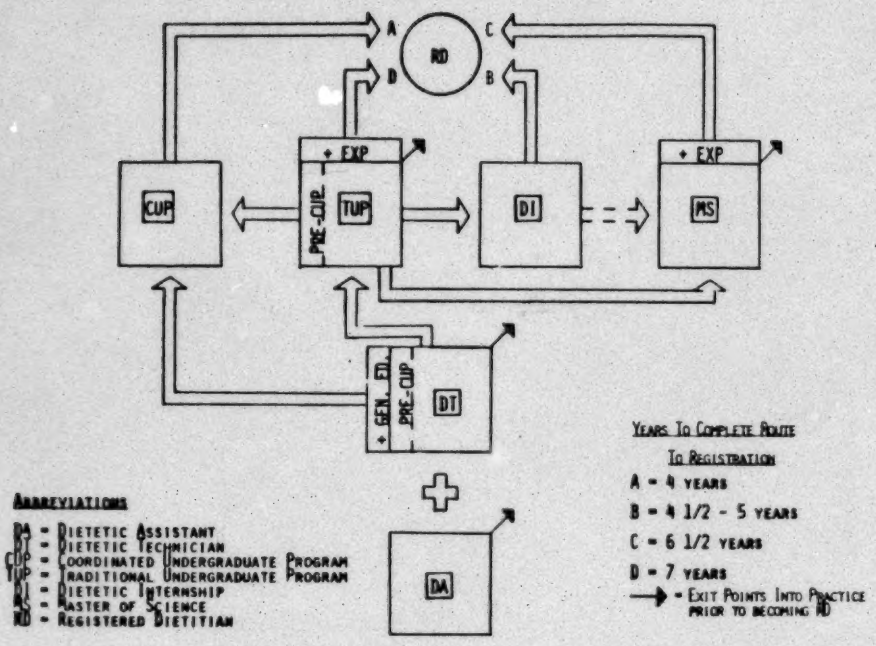

Figure 3.0. Nutrition/Dietetic articulation model.

The American Dietetic Association's approval and accreditation guidelines for educational programs facilitate geographic mobility and certain aspects of career mobility. The minimum academic requirements as a part of or prerequisite to approved or accredited dietetic programs set the stage for comparability between types and/or levels of programs. However, the clinical requirements are not as easily integrated into a system of articulation. The coordination of clinical and didactic education varies depending not only on the type of program but also on the level and actual location of the programs. For example, two levels of programs in the same educational institution are more likely and able to establish viable articulation. However, if one of the programs does not have a clinical

component (i.e. as in a traditional undergraduate program) the clinical experience of the first level cannot build on or be linked to the non-existent clinical component in the next level.

EDUCATIONAL CHALLENGES OF DIETETIC ARTICULATION

The challenges of articulation in any profession are great and have been discussed in terms of a "Career Ladder" based on an "Educational Ladder."

> . . .The Career Ladder. . . proposes that a health profession can be engineered so that an individual can enter the profession at any of the various levels, in any field, and then transfer laterally or advance vertically as far as his abilities and interest take him. The second idea of an Educational Ladder is proposed as an undercarriage to the Career Ladder. The general goal expressed in the catch-phrase "Educational Ladder" is that training for the health professions should be totally integrated: each component of the system should have basic relevance to all other components. An individual's educational experience should enhance, not hamper his ability to traverse career distances. It is, of course, this concept of educational mobility that presents the allied health educator with his (her) most immediate challenge (Zimmerman, 1970).

Adding general education requirements to clinical and didactic requirements compounds the limitations to effective dietetic articulation. The issue becomes a philosophical one as well as academic. "...Professional education must separate what is required for the general and liberal education of a person and what is required to perform tasks and the functions needed in providing health care... While they may reinforce each other, there is not necessarily a correlation between ability to perform certain tasks and general education" (Mase, 1976). However, the Nutrition/Dietetics Advisory Group generally felt general education was an essential component in developing a well-rounded individual.

Interpretation of the delineation of dietetic practices serves as the mainstay for dietetic curricula. The "success" of the graduates from those curricula

holds some fundamental assumptions about their ability to learn to function and keep abreast of social, economic, medical, scientific and technological changes. "To respond to change is important - necessary but not sufficient. We must anticipate need for changes and prepare for them. Anticipation of major challenges to demonstrate our services and document their worth leads to re-examination of the traditional tenents of (the dietetic) profession" (Galbraith, 1980).

The real challenge of dietetic articulation remains in assuring the appropriate rationale for interpreting the delineation of dietetic practices. Once interpreted, the challenge remains of integrating the didactic, clinical and general education components in an articulated system of dietetic education. The Kentucky Allied Health Project addressed these challenges on a statewide basis with the active support of faculty from each Kentucky educational institution providing nutrition/dietetic programs.

STATEMENT OF THE PROBLEM

Students graduating from a two year associate degree (AD) program as dietetic technicians generally are unable to transfer their 450 clinical hours as clinical hours to a baccalaureate program. Therefore, the AD graduate has little or no opportunity to use their clinical credits toward a baccalaureate degree in a traditional undergraduate program (TUP) in dietetics. Also, the AD clinical credits are not generally accepted by a coordinated undergraduate program (CUP) since accreditation by ADA mandates chronological congruence of baccalaureate level didactic and clinical courses. While this appears to be a sound rationale for the BS student it hinders career mobility for the AD graduate. The question arises to what extent is this hindrance a valid barrier to articulation in dietetics; and how can the barrier be overcome?

A student graduating from a TUP has several options to becoming eligible to take the registration exam for dietitians:

1) complete a dietetic internship,
2) complete a master's program in nutrition in addition to six months of preplanned and approved work experience,
3) complete three years of preplanned and approved work experience.

A graduate from a CUP is already eligible to take the registration exam upon successful completion of the program.

The problem becomes apparent only after investigating the number of TUP graduates (approximately 45) compared to the limited number of available openings leading to registration eligibility (six internship positions) as shown in Figure 4.0. The question is what exactly happens to the Kentucky population of TUP graduates where there's a limited supply of options to become eligible to take the registration exam? Do they desire to become registered dietitians? Do they leave the state? Do they work at lower level, lower paying jobs? Do they even practice dietetics at all? The answers to these questions are essential in determining the effectiveness of nutrition/dietetic educational programs in meeting students needs and the states dietetic manpower requirements.

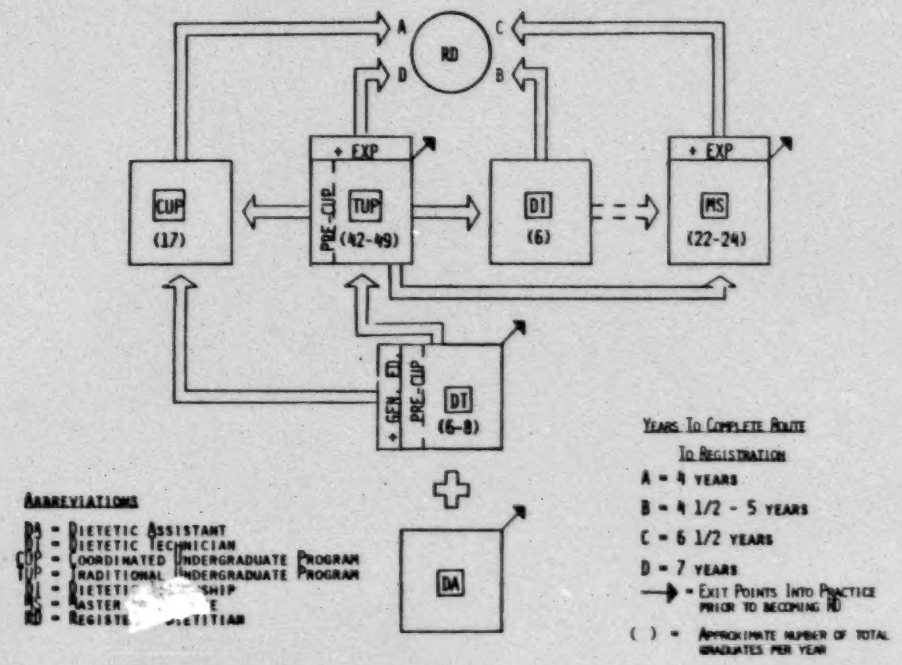

Figure 4.0 Nutrition/Dietetic articulation diagram of Kentucky graduates.

3 DISCIPLINE ADVISORY GROUP ACTIVITIES

The Nutrition/Dietetics Discipline Advisory Group followed a sequence of activities which addressed various aspects of dietetic articulation. Competency-based education (CBE) provided the theoretical framework for the development of transfer agreements. The concept of a CBE curriculum suggests a curriculum structure to assure competency of graduates.

With this in mind a "curricular component form" was developed to systematically gather relative information about each program. The form included a list of all preprofessional and professional courses required by the curriculum. Each course was described in terms of clock hours, credit hours, percent of lecture or laboratory teaching methods, minimal grade or competency level accepted, and flexibility of its sequence in the curriculum.

The types of clinical affiliations the program used (i.e., gentlemen's agreement, business letter, memorandum of agreement or contract) were also indicated. The percent of students' total clinical experience, the number and status of clinical instructors, the use of learning objectives, method and timing of the students' clinical evaluation were all part of the review of students' experiential learning.

The complementary components to these data were the course description,

outline, competency-based objectives and methods of evaluation for each course in the curriculum.

Therefore, similar competency-based programs were able to be compared because in a competency-based system concepts are presented in an integrated manner as students systematically acquire the necessary skills (May, 1979). A CBE curriculum arranges learning around the functional elements or competencies of practice.

The assumption was made that programs educating individuals to practice in the same discipline at different levels teach some similar skills and knowledge. Equipped with this assumption and pertinent curricular information the similarities (i.e., transferrable credits) were identified.

The Program Evaluation and Review Technique (PERT) was used to organize the Group's activities to most efficiently and effectively meet Project goals. (See Appendix A.)

ARTICULATED CURRICULUM MODEL

The American Dietetic Association has begun to rebuild the conceptual framework for the profession, which is the first component in the process of providing specific and differential meaning to each level of dietetic practice (Hamilton, 1980). Delineating tasks so that roles of each level of practice are more clearly understood and accepted, enables activities at the professional level to be significantly enhanced through the quality care provided by technical personnel. This was specifically why KAHP undertook such an extensive study of dietetic practice. Without the results of a comprehensive delineation study, planning for and designing a model articulated curriculum could not be accomplished.

Finding a mechanism to coordinate the individual attempts to delineate tasks was a critical issue in KAHP, as it will be for future dietetic articulation across the nation. Just as important was finding a mechanism to respond to the inevitable changes in future health care. The 1980 Report of the National Commission on Allied Health Education addressed all these issues, directly reflecting and substantiating Kentucky's concerns for delineation of discipline tasks and concomitant system of articulation. Inherent in Kentucky's concept of articulation was the consequential improvement of allied health education and health care delivery. The methodology KAHP utilized proposed an objective means by which to attempt such a response and still accomodate the discoveries and changes modern science and technology will continue to bring to health care.

The development of an articulation model included delineating dietetic tasks by level of practice. The Health Services Mobility Study (HSMS) Method of Task Analysis and Curriculum Design (Gilpatrick, 1977) was adapted to produce a viable delineation of dietetic practices in Kentucky. The tasks were developed to serve as the data source for planning an objective approach to designing a model articulated curriculum in dietetics. The methodology was comprised of six distinct steps.

1. A master list was identified of all "tasks" within the profession.
2. Each task was systematically described according to a strict definition of the term "task."
3. Each task description was scaled for the type and level of skill required for its successful performance and annotated regarding which part(s) of the task requires it.
4. Each task description was then scaled for the type and level of knowledge required for its successful performance and annotated regarding which part(s) of the task requires it.
5. The task list, descriptions and skill/knowledge scalings were validated for accuracy and comprehensiveness by external evaluators; revisions and corrections were made as appropriate.

6. The data were finally analyzed through a series of procedures. Briefly:

   A. scaling values, and therefore, tasks were ranked within and among the tasks;
   B. based on the rankings, cluster analysis was performed to identify groups of tasks;
   C. levels of practice within each group were distinguished using the "increasing" levels and numbers of skills and knowledge areas assigned to the tasks;
   D. job descriptions and corresponding educational objectives were compiled from the task data for the delineated levels of practice.

Critical to the implementation of the method was an understanding of the HSMS term "task" as defined by Gilpatrick.

In the HSMS method a task is defined so that it can identify a unit of work which can be moved from one job to another without disrupting other work activities. The task is conceptually smaller than a job as whole, and generally smaller than the work needed to produce an entire product, such as a health service or a manufactured item. The task is part of a series of work activities which are steps leading to or assisting in the production of final products. The task is defined in terms of a performer's outputs rather than an institution's products; the latter are the units that are sold. The HSMS definition of a task is as follows:

> A task is a series of work activities (elements) which are needed to produce an identifiable output that can be independently consumed or used, or that can be used as an input in a further stage of production by an individual who may or may not be the performer of the task.
>
> In principle, someone other than the performer of the task must potentially be able to use or consume the output of the task.

Consumption of an output means that it is used up, sometimes at the point of production. For example, served food, an administered injection, or counseling are all examples of outputs which are consumed rather than further acted upon. An output is used as in input in a further stage of production if it is a changed condition or something which will be further acted on by other performer(s) in a series of activities that result in a final product.

The component steps of a task are its elements. They include the steps needed to initiate the task, carry it out, and terminate it. The elements are the individual small units of work, whether physical and/or mental, which produce the output. Elements do not have identifiable outputs which can be consumed or used independently, or which can serve as inputs in a further stage of production by anyone other than the person carrying them out (Gilpatrick, 1977).

One of the major advantages of the HSMS methodology is recognition of its ability to continually respond to innovative practices without conducting a new delineation study in the future. New or modification of existing practices can be defined and described according to the HSMS methodology. The same skill and knowledge scaling procedures can be conducted and results can be inserted in the existing matrix of computerized task data. What actually results would be readily computable and retrievable data about how the new practices relate to and influence the existing framework of tasks, levels and job structures. The subsequently revised job structures and their levels would need to be re-evaluated for their relevancy in the sequence of dietetic practices. However, the revision and effort to update practices would be minimal in relation to the time and necessary resources required to repeat a delineation study.

Once the DAG's initial study was completed, (Volume 2 - Delineation Study) a mechanism was available for educators and practitioners to respond to the progress in health care through an objective means. Realistically, history has proven change to be inevitable. The Health Services Mobility Study Method of Task Analysis and Curriculum Design, as adapted by KAHP, suggests a viable alternative to dealing with the change process. The KAHP adaptations made it not only a feasible, but an obvious and available response to the delineation dilemma. (Based on the DAG's work the methodology was also implemented by a statewide nursing project.) The methodology should not be ignored and requires a national investigative approach to ascertain its ability to meet the goals of an ongoing national delineation study.

PROCESS FOR NEGOTIATING AGREEMENTS

Figure 5.0 illustrates the process KAHP used for negotiating transfer agreements. Each step in the process is described as follows:

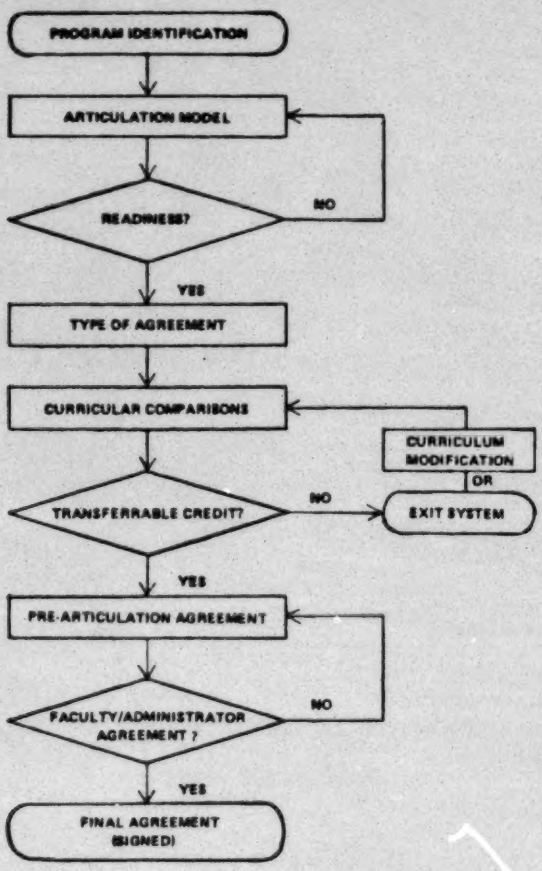

FIGURE 5.0. Process for Negotiating Transfer Agreements.

Identify Programs. All dietetics programs were identified. The members of the discipline advisory group represented each of the programs. A comprehensive program inventory of all Kentucky allied health educational programs by discipline and degree was compiled specifically for this purpose. While the Council collected information for public higher education, a complete directory needed to include private education, vocational education, hospital-based programs and proprietary programs.

Develop a Theoretical Articulation Model. The program inventory served as the data source for preparing a diagrammatic view of the relationship between programs. The resulting articulation models illustrated all the possibilities for

transfer of credit. Figure 3.0 on page 28 illustrated the articulation model in nutrition/dietetics.

Rank Order Transfer Agreements. Identifying the most feasible transfer agreements evolved from program to program communication. Such feasibility was essentially determined by three factors: (1) geographic proximity of programs potentially involved in the agreement, (2) status of program development and readiness to articulate, and (3) active interest to work out conditions of agreement for transfer of credit.

Determine the Type of Agreement. The type of agreement was determined during the early planning stages. This was necessary to ensure participation from all possible programs. The leadership role was assumed by individuals that had internalized the purpose and benefits of documenting conditions of agreement.

Once the specific programs decided a transfer agreement was desirable the following steps were completed:

1. Review respective curricula including course content and sequence. The curricular comparisons took a significant amount of time. However, this DAG activity laid the groundwork for developing cooperative and trusting relationships between interested programs.
2. Mutually determine the existing amount of coursework/credit transferrable. Depending on the curricular comparisons the major component of the agreement was derived from the agreed similarities between programs.
3. Draft a pre-articulation agreement following the provisions for developing a transfer agreement. A "Checklist for Developing the Transfer Agreement" was designed to serve as a guide for writing the transfer agreement. Using the checklist and

the previously identified transferrable course work/credits the Council staff wrote the first draft of the agreement for program consideration and review. The draft became a working document for subsequent discussion and agreement.

4. Schedule a meeting between faculty and administrators to review and discuss the agreement. It was important for the individuals involved to be the faculty and administrators who would be instrumental in authorizing and implementing the agreement. These representatives knew the institutional policies and procedures that were required for successful implementation of the agreement.

5. Secure authorizing signatures on final transfer agreement. Depending on the stage of readiness more than one draft was often required before signatures were obtained. A modified version of the developmental group process the DAGs experienced was also evident here. Each time a new person was brought into the negotiations (e.g., an administrator familiar with but not actively involved in Kentucky Allied Health Project or additional faculty not participating on the DAG) significant orientation time was required. However, this orientation time was critical to the ultimate signing of the agreement.

With the successful signing of the transfer agreement students had the door to career mobility opened wider for them. In addition programs were enriched and their potential applicant pools were increased.

4 RESULTS

STATEWIDE SYSTEM OF DIETETIC EDUCATION

The Nutrition/Dietetics Discipline Advisory Group accomplished a great deal toward statewide coordination of nutrition/dietetic education. In general a better understanding was developed of the similarities and differences between programs and provided a forum to be able to learn from other programs. Data were made available through the communication of the group that provided valuable help for existing and new faculty to become knowledgeable about the characteristics of other nutrition/dietetic educational programs. The DAG agreed that the group should be continued in order to address and monitor the coordination of dietetic education in Kentucky. To this end, DAG members approached the Kentucky Dietetic Association (KDA) Board to request support for maintaining the structure and organization of specified DAG activities.

ACCOMPLISHMENTS

The nature of the profession influenced both positively and negatively the success of achieving an articulated system of dietetic education. The DAG's efforts resulted in the design and implementation of various studies and documents addressing pertinent issues. These efforts are summarized as follows:

Common Core of Courses. Based on the curricular comparisons approximately 25 courses were identified as similar among the undergraduate programs. (See Table 3.0.) These include general education as well as dietetic courses and related prerequisites.

Transfer Agreement. Once the common core of courses was identified "Conditions of Agreement for Transfer of Credit" were established. The "Conditions of Agreement" were essentially based on the fact that all the programs involved were approved or accredited by the American Dietetic Association. Clinical courses were not included in the "Agreement" due to their structured nature and sequencing. However, the DAG recommended a mechanism to encourage future transfer of clinical course credits by developing guidelines for students to present a portfolio of their clinical coursework.

There were differing philosophies about the most appropriate mechanism to document the comparability of the statewide core of dietetic courses. Some individuals believed it was redundant to write transfer agreements when they were already facilitating transfer on a student by student basis. Although KAHP staff believed the best way to assure students' rights over time was through formal transfer agreements, the democratic process prevailed. Programs refraining from transfer negotiations were still part of the cooperation that matured during KAHP. However, the formal transfer agreement was viewed as the best mechanism to insure continuation of the "agreement" in the event of faculty turnover and other financial and/or political forces.

Eastern Kentucky University Department of Home Economics was the first to actively pursue signing a formal transfer agreement. (See Appendix B.) It stipulates the provisions by which EKU will award credit for the core of courses identified by the DAG.

The internal articulation at EKU is deisgned so that students enter the freshman year in the dietetic technician program and complete 450 clinical hours

Table 3.0

Kentucky Undergraduate Dietetic Programs:

Basic Curriculum Core

(ADA Plan IV)

Content Areas	EKU (AD)	EKU (BS)	MuSU (AD)	MuSU (BS)	WKU (BS)	MoSU (BS)	Berea (BS)	KSU (BS)	UK (BS)	CUP-UK	CUP-Spald.
English (Composition) (2)	X	X		X	X	X	X	X	X	X	X
Communication (Speech)		X	X	X	X			X		X	X
Psychology	(X)	(X)	X	X	X	X	X	X	X	X	X
Anthropology	(X)	(X)			X		X	X	X	X	
Sociology	(X)	(X)	X	X	X	X	X	X	X	X	X
Educational Psychology (Home Ec. Teaching)	X	X		X		X	X	X	X	X	X
Economics	X	X	X	X	X	X	X	X	X	X	X
Accounting (Food Service Accounting)			X	X	X		X	X	X	X	
Math (for Health Sciences)	X	X		X	X	X	X	X	*	*	
General Chemistry I	X	X	X	X	X	X	X	X	X	X	X
Organic Chemistry	X	X		X	X+	X	X	X	X	X	X
Biochemistry		X		X	X+	X	X	X	X	X	X
General Biology			X	X					X	X	
Microbiology		X		X	X	X	X	X	X	X	X
Anatomy and/or Physiology	X	X		X	X	X	X	X	X	X	X
Human Nutrition	X	X	X	X	X	X	X	X	X	X	X
Advanced Nutrition		X++		X	X	X	X	X	X	X	X
Diet Therapy	X2++	X2++		X	X	X	X	X	X	**	X
Food Preparation	X	X	X	X	X	X	X	X	X	X	X
Meal Management				X	X	X	X	X	X	X	X
Principles of Management	X	X	X	X	X	X	X	X	X	**	
Food Service Sys. (Institutional)	X++	X++	X	X	X	X	X	X	X	**	X
Purchasing (Procurement) (Accounting)		X++		X	X	X		X	X	**	X
Food Production (Quantity)	X++	X++		X	X	X		X	X	**	
Experimental Foods		X		X	X			X	X	X	
Food Service (Institutional) Equipment		X		X	X	X		X	**	**	

(X) Students at EKU have the option to choose one course from psychology, anthropology or sociology.
* Not required unless SAT score is low.
** Content presented in clinical course and, therefore, CUP-UK will not automatically accept transfer of credit.
+ Organic Chemistry and Biochemistry are presented in the same course at Western Kentucky University.
++ Clinical Courses offered in conjunction with these didactic courses are not included in this agreement.

if they choose to exit as technicians with associate degrees. This requires a summer practicum after the sophomore year. However, if students choose to continue through the baccalaureate program, the summer session is not required. Graduates of the associate degree who re-enter at a later date transfer credit for all their didactic and clinical work toward the baccalaureate degree.

Transfer Guide. The extensive analysis of dietetic programs provided a wealth of data about the variations in curricula, admission policies, retention policies, class capacities and consequently about implications for transfer students. The "Counseling Guide for Transfer Students" was compiled directly from the DAG's work and disseminated to all the Kentucky nutrition/dietetic programs. The Guide assists faculty in directing students pursuing career mobility and/or transfer of credit. (See Volume 3.)

Student Brochure. In order to distribute the results of the DAG's activities (i.e. the common core of courses, educational and career mobility opportunities) the information was compiled in a brochure for students. It was designed to provide general awareness about the nutrition/dietetic field and to be used as a counseling tool specifically for Kentucky programs. Similar brochures were developed for all the disciplines involved in KAHP.

Delineation Study. The dietetic delineation study was conducted by the DAG to establish a model articulated curriculum founded on a statewide effort. The results of the study provided a data base to facilitate developing greater articulation, especially in transferrability of clinical courses by providing a curriculum model. (See Volume 2.) While the DAG realized the limitations of their work, the opportunity to update the results is continually available using Kentucky's adaptations of the Health Services Mobility Study Methodology (Gilpatrick, 1977).

Graduate Follow-up. A system of graduate follow-up was designed and

implemented by the nutrition/dietetic programs statewide. The procedure involved surveying graduates for the past five years (1977-1981.) The questionnaires were developed by the DAG for the purpose of collecting comparable data to address pertient and unique issues about dietetic programs. (See Volume 4.)

The results of the follow-up study are intended for use during review of existing programs by the Council on Higher Education and also for inhouse assessment by the individual programs. This will be a major cooperative effort to inform the Council about the status of dietetics in Kentucky via a concerted statewide approach.

Student Interest Survey. In an effort to more clearly define students' interest and awareness of the various routes to registration and intended career goals, students graduating during the current (1981-82) academic year were selected to serve as a survey sample. The DAG designed the form to reflect significant and unique characteristics of dietetics and dietetic education as perceived by students. Briefly, 70% of the respondents indicated their career goals included becoming a registered dietitian and that a significant number of graduates from the traditional undergraduate programs desire to become registered dietitians. However, only the six post-baccalaureate internship positions remain available. While many of these students would select the masters degree to meet their career goals it appeared questionable students were fully aware of the coordinated undergraduate program option.

DAG-Task Force Interaction. The Nutrition/Dietetics DAG made the following recommendation to the Allied Health Task Force (TF) regarding the continuation of KAHP activities after the termination of federal funds on June 30, 1982: that a multi-disciplinary task force be formed to represent the allied health programs and continue the statewide forum for articulation and other allied health concerns. As a result of the DAG's suggestion the Allied Health Task Force was expanded to include a representative from each of the five disciplines. Therefore,

comprehensive and informed discussions and decisions about the specific professions can be maintained. It was the insight of the Nutrition/Dietetics DAG members about the purpose and achievements of KAHP which led to a feasible solution to statewide communication.

Additionally, the DAG plans to continue meeting on an annual basis so that two-way DAG-TF communication will continue.

Kentucky Dietetic Association (KDA) Involvement. The nature of DAG/KAHP activities demand ongoing update to maintain the relevancy of selected achievements. For example, the common core of courses may change as programs modify their curricula. Such changes would also influence the "Conditions of Agreement for Transfer of Credit", student brochures and the Counseling Guides. Consequently, the DAG approached the KDA Board, requesting the Career Guidance Committee be responsible for annual update and dissemination. Once the Board approved the request a manual was compiled of the information pertinent for the data collection/update procedures and presented to the Board and Career Guidance Committee.

RECOMMENDATIONS

Throughout the course of KAHP, the Nutrition/Dietetics Discipline Advisory Group discussed numerous issues and concerns specifically related to articulation. However, discussions could not avoid also focusing on more generic concerns in dietetic education and practice.

There were variations in concerns and philosophies held by each member of the Discipline Advisory Group. The Nominal Group Technique (Delbecq, 1975) was utilized (after approximately 15 monthly DAG meetings) to provide opportunity for everyone to identify matters pertinent to their arena of dietetics.

A list of recommendations resulted. However, the final sequence did not reflect a consensus of the Group's priorities, but rather the totality of everyone's recommendations. Based on a combination of the data contained in the DAG's Volume 1 Report, the Nominal Group results, and subsequent meetings, the following recommendations are offered to "enhance dietetic articulation and statewide coordination of Kentucky dietetic education." The accomplishments of the DAG to date (as described in the previous section) relate most directly to Issue No. 4. Graduate follow-up and manpower studies underway and the Transfer Guide also address Issue No. 1.

ISSUE NO. 1

DIETETIC TECHNICIANS ACCUMULATE 450 HOURS OF CLINICAL EXPERIENCE FOR WHICH THERE IS NO COMPARABLE CREDIT AWARDED IN TRADITIONAL UNDERGRADUATE PROGRAMS. ARTICULATION COULD BE MADE MORE EFFICIENT IF A DIETETIC TECHNICIAN TRANSFERRED TO A COORDINATED UNDERGRADUATE PROGRAM (CUP) WHICH REQUIRES 900-1100 HOURS OF CLINICAL EXPERIENCE AND IF THE DIDACTIC COMPONENT TO MATCH THE CLINICAL EXPERIENCE WERE ALL GIVEN IN THE LAST (2) YEARS OF THE CUP.

RECOMMENDATION NO. 1

1.1 The most efficient articulation of the clinical component in dietetic education suggests a dietetic technician transfer to a coordinated undergraduate or a dietetic internship program and be awarded credit for their clinical experiences. Therefore, if articulation is to be enhanced in Kentucky, a larger number of openings should be made available in existing and/or new coordinated undergraduate and/or dietetic internship programs. Manpower and graduate follow-up data are prerequisite to implementing this recommendation.

1.2 In addition, students' clinical experience should be described in terms of clinical competence versus simply in terms of number of clinical hours (e.g. develop student portfolios of their clinical experiences) to facilitate efficient articulation.

1.3 Dietetic technician students should be counseled as early as possible about the differences in the various baccalaureate and post-baccalaureate programs. Appropriate sections of the final report should be compiled in a separate student counseling manual.

ISSUE NO. 2

THE VARIABLE FLEXIBILITY OF KENTUCKY UNIVERSITIES' GENERAL EDUCATION COMPONENTS LIMITS THE EASE OF DIETETIC ARTICULATION VERTICALLY AND/OR HORIZONTALLY. DESPITE A DIETETIC TECHNICIAN'S ABILITY TO MEET COORDINATED UNDERGRADUATE PROGRAM PREREQUISITES AND BE ACCEPTED INTO THE PROGRAM, AN ADDITIONAL (FIFTH) YEAR IS STILL REQUIRED FOR THAT STUDENT TO MEET THE RECEIVING INSTITUTION'S GENERAL EDUCATION REQUIREMENTS FOR GRADUATION.

RECOMMENDATION NO. 2

Closer alignment should be attempted between the general education requirements of the state supported universities and/or requirements should be waived or course substitutions allowed in order to facilitate dietetic articulation.

ISSUE NO. 3

THE AVAILABILITY OF CLINICAL SITES VARIES FOR EACH KENTUCKY NUTRITION/DIETETIC PROGRAM AND THE USE OF CLINICAL SITES BY SOME PROGRAMS OFTEN CHANGE. PERTINENT DATA COLLECTION IS NOT ROUTINELY CONDUCTED TO SYSTEMATICALLY SHARE THE USE OF CLINICAL SITES.

RECOMMENDATION NO. 3

3.1 A directory should be maintained of available clinical sites to assist in the most efficient scheduling and sharing of these clinical facilities.

3.2 Coordination of the use of clinical sites could facilitate efficient and effective dietetic education and, potentially, articulation of Kentucky nutrition/dietetic programs. The nutrition/dietetics DAG should be continued and utilized as a forum to collect data and coordinate the use of clinical sites.

ISSUE NO. 4

THERE ARE UNIQUE CHARACTERISTICS OF DIETETIC EDUCATION WHICH MUST BE CLEARLY UNDERSTOOD IN CONDUCTING A VALID REVIEW AND/OR IN APPROVING DIETETIC EDUCATIONAL PROGRAMS AT THE INSTITUTIONAL AS WELL AS THE STATE LEVEL. A STATEWIDE FORUM FOR COLLECTING AND DISSEMINATING THIS TYPE OF INFORMATION HAS NOT PREVIOUSLY BEEN AVAILABLE.

RECOMMENDATION NO. 4

4.1 The purposes and characteristics of dietetic educational programs must be defined before reviewing the various components of any program.

4.2 The Council on Higher Education should be provided with appropriate data developed by the discipline advisory group to become familiar with the characteristics of dietetic education.

4.3 Distinguishable guidelines should be established for the state's review and/or approval of experiential versus didactic oriented programs where program standards are different.

4.4 Questionnaires should be sent to every graduate of each dietetic program in Kentucky to survey the outcome of dietetic education in its ability to be sensitive in meeting Kentucky manpower requirements. Additional manpower data should be made available to serve as one indicator of Kentucky nutrition/ dietetic manpower requirements and related educational needs.

4.5 Graduate follow-up should be conducted and actually used as one component in the state's review of dietetic education programs. The DAG should be involved in and utilized to establish a statewide system of graduate follow-up for nutrition/dietetic programs.

4.6 The structure of the discipline advisory group as a statewide council should be maintained to incorporate new programs and modifications in existing programs into the data base of the current system of dietetic education. The discipline advisory group should be used as a clearinghouse.

4.7 The similarities and differences in the Kentucky dietetic curricula found in this report should be used by the individual programs as a tool for their own in-house evaluation and in conjunction with other data (e.g. graduate follow-up results.)

ISSUE NO. 5

ACADEMIC FREEDOM REMAINS THE RIGHT OF EACH KENTUCKY NUTRITION/DIETETIC EDUCATIONAL PROGRAM. STANDARDIZATION OF DIETETIC CURRICULA FACILITATES ARTICULATION BUT INFRINGES UPON ACADEMIC FREEDOM.

RECOMMENDATION NO. 5

The autonomy of each Kentucky nutrition/dietetic education program should be maintained as well as the autonomy of each educational institution. Articulation at the expense of academic freedom should not be the goal of continued DAG efforts.

ISSUE NO. 6

A MODEL ARTICULATED CURRICULUM IS FUNDAMENTAL TO THE DESIGN AND IMPLEMENTATION OF DIETETIC ARTICULATION, ESPECIALLY REGARDING ARTICULATION OF THE CLINICAL COMPONENTS OF DIETETIC EDUCATION.

RECOMMENDATION NO. 6

6.1 The dietetic delineation study conducted by the discipline advisory group should be refined in order to develop specific levels of dietetic competencies for the Commonwealth of Kentucky.

6.2 The dietetic technician courses should be investigated in conjunction with the dietetic delineation study to determine their transferrability.

ISSUE NO. 7

THE FEASIBILITY OF IMPLEMENTING CHANGES TO ENCOURAGE MORE EFFICIENT ARTICULATION INVOLVE SEVERAL BUDGETARY CONSEQUENCES. PLANNING FOR SUCH CHANGES REQUIRES APPROPRIATE ADMINISTRATIVE AS WELL AS FACULTY SUPPORT.

RECOMMENDATION NO. 7

7.1 All the appropriate participants in implementing changes to facilitate dietetic articulation should be made aware that dietetic articulation requires more planning, and individualized supervision. More faculty, clinical instructors, clinical facilities and, therefore, more funding for salaries, student housing and travel are necessary.

7.2 The similar requirements to implement more articulation in all the discipline advisory groups should be investigated and approached collectively. Therefore, reports from each discipline advisory group should be distributed to every other group.

7.3 In order to promote cost-containment, the activities of accrediting/ approval bodies should attempt to be coordinated when conducting on-site activities with similar types of programs in the Commonwealth of Kentucky.

5 SUMMARY AND PLANS FOR FUTURE ACTIONS

The sharing of information and new ideas about issues in nutrition/dietetic articulation fostered a camaraderie and established a valuable forum for continued communication. While the DAG members generated several recommendations to enhance articulation in Kentucky, the process by which this occurred necessitated a more global investigation of dietetic practice and education. The Group's willingness and ability to be objective as well as thorough, initially culminated in the DAG's Final Report (Volume 1). This provided the impetus to document the nutrition/dietetic delineation study (Volume 2), the counseling guide for transfer students (Volume 3), the system of graduate follow-up (Volume 4) and student brochures.

The "Conditions of Agreement for Transfer of Credit for Courses in the Kentucky Core of Dietetic Courses" reflect the options the DAG identified for career mobility for transfer students. Efforts specific to this type of statewide coordination did not exist prior to the formation of the DAG. Eastern Kentucky University was the first to formalize the agreement. (See Appendix B.) The ability of the Group to address potentially sensitive issues encouraged cooperation and promoted better utilization of student and institutional resources as well as faculty development. Pertinent data about the unique characteristics of dietetics

were identified to facilitate informed decision making at the state planning level.

The originally anticipated outcomes based on the rationale and goals of the entire Kentucky Allied Health Project were clearly impacted upon by the Nutrition/Dietetics Discipline Advisory Group's activities. The DAG

(1) increased the options for greater career mobility by developing the core of courses and transfer agreement,

(2) increased cooperation among institutions by meeting for almost three years and implementing alternatives to continue functioning as a group,

(3) identified mechanisms to improve utilization of existing resources by implementing student interest/graduate follow-up surveys, and recommending a manpower study in dietetics,

(4) established a clearer definition of entry level competencies by type and level of program by conducting the dietetic delineation study and distributing the model curriculum,

(5) addressed issues concerned with decreasing proliferation of programs by conducting program and graduate follow-up surveys, by identifying the need for a dietetic manpower survey and proposing to the Kentucky Dietetic Association that such a study be implemented,

(6) consequently addressed ways to reduce costs, and

(7) developed products to serve as a demonstration model for other states by documenting the process models and results for all activities conducted throughout KAHP.

Articulation was viewed by the DAG as a many faceted issue. The articulation model designed by the DAG maintained the reality that each variation of the system served the purpose of different types of students and various components of nutrition/dietetic practice. Therefore, the DAG's results did not attempt to imply one component of the system of dietetic education was more appropriate than another. Rather, the needs of the student and the needs of the profession were addressed in relation to the feasibility of a statewide system of dietetic education.

FUTURE ACTIONS

The desire of the Discipline Advisory Group members to continue to meet on an annual basis would seem to confirm their recognition of the DAG's purpose and ultimate benefit.

Future meetings. The DAG will continue to meet at least annually and also maintain an active member on the Allied Health Task Force. Although the Task Force plans to meet quarterly the nature of Kentucky Dietetic Association involvement will facilitate communication between DAG members throughout the year.

Manpower Study. Based on the DAG's recommendation to conduct a manpower study of dietetic personnel in Kentucky, the KDA Board approved the survey. Members of the Board (including some DAG members) will organize the study and approach the Kentucky Hospital Assocaition for its support. Additionally the models KAHP used to implement similar studies in respiratory therapy, clinical laboratory science and radiological sciences were made available to KDA.

Graduate Follow-up. The responses from this study are currently being analyzed. Comprehensive results will be shared with the DAG. It is anticipated the DAG will consequently be able to provide valuable information to the Council on Higher Education during its review process for existing programs.

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APPENDIX A

Planning and Evaluation with PERT and Nutrition/Dietetics PERT Activities

PLANNING AND EVALUATION WITH PERT

Introduction

Planning and evaluation have been distinct challenges to persons writing proposals or implementing projects. One method for managing these challenges is the Program Evaluation and Review Technique (PERT).

PERT forced the identification of project activities that were necessary to reach the project goal and permitted evaluation of progress toward the goal. For example, when KAHP activities for the first year were planned and subjected to PERT, it was evident that failure to complete the activities in the amount of time prescribed was likely. A 68 percent probability of completing the first year activities was calculated.

Alternative solutions to the problem, as identified by PERT, were discussed by Council staff. Adjustments were made and the probability of completing the activities was elevated to 72 percent; however, the success of the project remained in doubt. Further adjustments were made and the probability of completing the first year activities increased to 95 percent.

Planning KAHP Activities

Project activities were identified and a Gantt chart was developed that depicted the activities of KAHP. Although the activities were identified and placed within time frames, the interrelationships among the activities were difficult to identify. Therefore, a "network" of activities was developed for the project. The network illustrated activities which were dependent upon other activities and activities which paralleled one another.

Three completion times, expressed in working day units, for each activity were estimated by Council staff: (a) most optimistic, (m) most likely, and (b) most pessimistic. A mean estimated time was then calculated for each of the three estimates per activity using the following formula:

$$T_E = \frac{a + 4(m)+b}{6}$$

The variance of the three mean time estimates per activity was calculated as follows:

$$V^2 = \left(\frac{b-a}{6}\right)^2$$

The critical path was the path requiring the largest amount of completion time. If sufficient amounts of time and resources were not available to complete the critical path, the success of the project was doubtful.

Several paths through the network were possible. The estimated times (T_E) for activities in each possible path were summed and a critical path (CP)

was identified. The other paths were considered alternate paths.

Three methods to increase the probability of completing the activities were available:

1. Increase the time available to complete the project (TL).

2. Identify time and resources available in parallel activities that may be applied to critical path activities; thus, reducing the total time estimate for the critical path.

3. Plan to complete selected activities along the critical path in less time than estimated (i.e. reduce the estimated time).

During the project, Council staff applied the second method. The estimated time for an alternate path was subtracted from the estimated time of the critical path. The difference was "slack time" and "slack resources;" those resources were applied to another activity in the critical path; thus, the total estimated time for the critical path was reduced.

The adjustment increased the probability of completing first-year the activities 4 percent; however, the chance of success needed to be improved, if possible. The length of the critical path was further reduced by using the third method of increasing probabilities.

By planning to concentrate several Council staffs' efforts and by incorporating materials prepared throughout the initial months of the project, the estimated time was reduced.

The probability of completion was recalculated after shortening the critical path. By reallocating personnel and resources in an alternate path and by shortening the critical path estimated time, the probability of completing the first year activities, for example, was raised from 68 percent to 95 percent. Council staff were more confident that a successful project was possible. The technique was applied throughout the project.

Evaluating KAHP Activities

A process for evaluating the degree to which the specific project objectives and the project goal were reached was developed by utilizing the inherent capability of PERT, i.e. an evaluation procedure. Although the PERT evaluation procedure can be utilized at the conclusion of a project, staff decided to use a portion of the procedure periodically, as activities along the critical path were completed. Thus, continual monitoring of the project's status permitted identification of potential future trouble spots. The evaluation procedures were used for KAHP DAG, TAG, and Task Force objectives at the conclusion of year one and during the beginning of year three.

A formative interim evaluation of advisory groups' attitudes and accomplishments was requested by Dr. Elizabeth King, Associate Director for Allied Health Education and KAHP Director, in November, 1980. The results were used to help: 1) identify specific advisory groups' activities/ issues which needed attention, 2) plan the KAHP final year activities, and 3) identify activities which may continue beyond the funding cycle of

KAHP.

Two evaluation designs were the foundations of all measurements. Attitudinal measurements were collected each time an advisory group met. The degrees to which advisory groups' activities were met were measured at the end of year one and during October-December, 1980 in the final year of KAHP.

Periodic evaluations of attitudes provided on-going feedback about each meeting to the KAHP staff and advisory groups. The instrument was administered at the conclusion of each meeting.

Output measures were: 1) the degree to which each advisory group's activities were accomplished, and 2) the advisory groups' attitudes. The groups' activities addressed the project's goals; attitudes were measured to assess the "climate" of the KAHP. Appendices are instruments used to collect data. The instruments were developed by the KAHP advisory groups and staff.

The schedule for attitude data collection paralleled DAG, TAG, and Task Force meeting dates (monthly). The instruments were administered by the KAHP staff at the conclusion of each meeting; each advisory group member completed an instrument. Interim activity evaluation instruments were administered in FALL, 1980 by KAHP staff at the regularly scheduled meeting or through the mail.

System Maintenance

At the conclusion of year three, staff identified activities which were necessary for the maintenance of A Statewide System for Allied Health Education. The PERT planning process was applied: (1) activities were identified, (2) a Gantt chart was constructed, (3) a network of activities was constructed, and (4) the times were estimated.

The probability of completing the activities can be calculated when the allowed completion time is determined. During system implementation, feedback from PERT evaluation procedures will provide formative evaluation data to the Council.

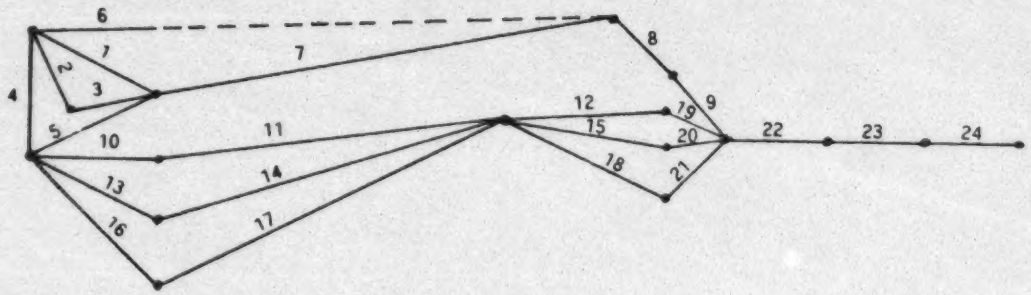
Discipline Advisory Group Activities

Activity Number	Activity
(1)	Review DAG charges as they relate to articulation models.
(2)	Identify evaluation and research technical advisory group (TAG) representative.
(3)	Confirm appointment of TAG representative.
(4)	Review location of DAG representatives programs.
(5)	Confirm location of meetings.
(6)	Identify current philosophies and goals of DAG member institutions/programs.
(7)	Identify roles and functions of practitioner by level.
(8)	Identify specific competencies and corresponding objectives.
(9)	Develop modules from identified objectives by level.
(10)	Identify Subcommittee on Curricula.
(11)	Compile data on current curriculur components.
(12)	Present data to DAG for discussion and recommendations regarding curricular components.
(13)	Identify Subcommittee on Admissions.
(14)	Compile data on current admission policies and practices.
(15)	Present data to DAG for discussion and recommendations regarding admission policies and practices.
(16)	Identify Subcommittee on Transfer Agreements.
(17)	Compile data on current transfer agreements.
(18)	Present data to DAG for discussion and recommendations regarding transfer agreements.
(19)	Write a report about similarities and differences in curricular components and report to DAG for final consideration and review.
(20)	Write a report about current admission policies and practices and report to DAG for final consideration and review.
(21)	Write a report about current transfer agreements and report to DAG for final consideration and review.

(22) Design articulated "model" including recommended phases to achieve the "model".

(23) Draft and submit "model" and recommendations to the task force.

(24) All the DAGs meet with the task force to share models.



Nutrition/Dietetics Discipline Advisory Group Activities PERT Chart.

APPENDIX B

Transfer Agreement

Conditions of Statewide Agreement for Transfer of Credit for Courses in the Kentucky Core of Dietetic Courses* to the Eastern Kentucky University 2+2 Dietetics Curriculum

It has been recognized there exists a significant core of common courses required in the majority of Kentucky dietetic educational programs. Based on the investigation of the 1979-81 Kentucky Nutrition/Dietetics Discipline Advisory Group under the auspices of the Council on Higher Education, the similarities among programs are listed in this agreement. Where other programs require courses similar to those in the dietetics curriculum at Eastern Kentucky University, agreement about their transferability was established and culminated in formal signing of these conditions:

(1) Upon formal documentation of successful completion of any American Dietetic Association approved course offered by a program listed in this agreement, Eastern Kentucky University shall award comparable credit toward the similar course required in the EKU dietetics curriculum.

(2) Successful completion of a course shall be defined by the standards established by Eastern Kentucky University as published in the college catalog.

(3) Students transferring to Eastern Kentucky University from any of the other institutions listed in this agreement shall be required to adhere to the admission and retention policies of EKU and those required specifically for the 2+2 dietetics program.

(4) The conditions of this agreements shall be made known and readily available to students/graduates of the other institutions listed in this agreement;

(5) EKU agrees to counsel transfer students at any stage of their transition about the nature, sequencing and options of the 2+2 dietetics

curriculum: all students receive technical training the first two years; students have the option to exit the program with an associate degree or continue in the program and receive a bachelors degree.

(6) Grievances regarding the conditions of this agreement from any institution listed in this agreement and/or students shall be made known to and addressed at the appropriate departmental and/or administrative level for discussion and action on the implication for amending, as appropriate, these conditions of agreement.

(7) The conditions of this agreement will be reviewed every two years and revised or amended as necessary.

(8) Termination of these conditions of agreement shall be at the discretion of Eastern Kentucky University.

(9) The conditions of this agreement shall be deemed invalid without the appropriate authorizing signatures from Eastern Kentucky University.

(10) Eastern Kentucky University 2+2 dietetics program maintains the right to change their curriculum and agrees to update this agreement as indicated.

May 28, 1982

ADA PLAN IV
KENTUCKY UNDERGRADUATE DIETETIC PROGRAMS
BASIC CURRICULUM CORE

Content Areas	EKU (AD)	EKU (BS)	MuSU (AD)	MuSU (BS)	WKU (BS)	MoSU (BS)	Berea (BS)	KSU (BS)	UK (BS)	CUP-UK	CUP-Spald.
English (Composition) (2)	X	X		X	X	X	X	X	X	X	X
Communication (Speech)		X	X	X	X			X		X	X
Psychology	(X)	(X)	X	X	X	X	X	X	X	X	X
Anthropology	(X)	(X)			X		X	X	X	X	
Sociology	(X)	(X)	X	X	X	X	X	X	X	X	X
Educational Psychology (Home Ec. Teaching)	X	X		X		X	X	X	X	X	X
Economics	X	X	X	X	X	X	X	X	X	X	X
Accounting (Food Service Accounting)			X	X	X		X	X	X	X	
Math (for Health Sciences)	X	X		X	X	X	X	X	*	*	
General Chemistry I	X	X	X	X	X	X	X	X	X	X	X
Organic Chemistry	X	X		X	X+	X	X	X	X	X	X
Biochemistry		X		X	X+	X	X	X	X	X	X
General Biology			X	X					X	X	
Microbiology		X		X	X	X	X	X	X	X	X
Anatomy and/or Physiology	X	X		X	X	X	X	X	X	X	X
Human Nutritinn	X	X	X	X	X	X	X	X	X	X	X
Advanced Nutrition		X++		X	X	X	X	X	X	X	X
Diet Therapy	X2++	X2++		X	X	X	X	X	X	**	X
Food Preparation	X	X	X	X	X	X	X	X	X	X	X
Meal Management				X	X	X	X	X	X	X	X
Principles of Management	X	X	X	X	X	X	X	X	X	**	
Food Service Sys. (Institutional)	X++	X++	X	X	X	X	X	X	X	**	X
Purchasing (Procurement) (Accounting)		X++		X	X	X		X	X	**	X
Food Production (Quantity)	X++	X++		X	X	X		X	X	**	
Experimental Foods		X		X	X			X	X	X	
Food Service (Institutional) Equipment		X		X	X	X		X	**	**	

(X) Students at EKU have the option to choose one course from psychology, anthropology or sociology.
* Not required unless SAT score is low.
** Content presented in clinical course and, therefore, CUP-UK will not automatically accept transfer of credit.
+ Organic Chemistry and Biochemistry are presented in the same course at Western Kentucky University.
++ Clinical Courses offered in conjunction with these didactic courses are not included in this agreement.

I, the undersigned, accept these conditions of agreement and authorize participation of the Eastern Kentucky University Dietetics Program as a member of the Kentucky Statewide System of Dietetic Education.

Janice Blythe, Coordinator
Nutrition Care/Dietetics
Department of Home Economics

Date

Betty C. Powers, Chairperson
Department of Home Economics

6-16-82
Date

Joseph Schwendeman, Dean
Office of Undergraduate Studies

6-21-82
Date

Kenneth S. Hansson, Dean
College of Applied Arts and Technology

6-14-82
Date

John D. Rowlett, Vice President
Academic Affairs & Research

Date

J. C. Powell, President
Eastern Kentucky University

7/1/82
Date